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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGHIEM, MICHAEL P

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 09/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/773,054

Applicant(s)

ECKARD ET AL.

Examiner

Michael P Nghiem

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31 is/are allowed.
- 6) ☒ Claim(s) 1,2,10,12-17,23 and 25-30 is/are rejected.
- 7) ☒ Claim(s) 3-9,11,18-22,24,32 and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 24 June 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

The Amendment filed on June 24, 2002 has been acknowledged.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 13, 15, 17, 26 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Nguyen et al. (US 5,638,099).

Nguyen et al. teaches:

- identifying a printhead-related service condition not adequately addressed by servicing the printer with the first module (wiping not adequately addressed due to wiper(s) on a sled wearing out; column 3, lines 63-67) in an un-used condition (printer is in a non-printing condition when being serviced),
- providing a second module with a function different from the first module and adapted to address the printhead-related service condition (provision of replacement sled, thereby providing a new wiper or wipers to address the wiping condition; column 3, lines

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63-67; with respect to claim 30, as no particular limitation to the "special service function" is defined, the different wiper function of a new wiper is deemed to be "special" with respect to the wiping function of a worn-out wiper),

- providing the second module to the printer user (user replaces the sled; column 3, lines 63-67; therefore, the module must be provided to the user),
- installing the second module (replacement of sled; column 3, lines 63-67),
- conducting a printhead-related service operation using the second module (implicit in the replacement, as the clear intent is to use the newly replaced sled after replacement thereof,
- printhead-related service condition includes global depriming of the printhead or ink starvation thereof, and the second module includes a negative pressure primer (anticipated by indication of priming, particularly at column 1, lines 27-35),
- printhead-related service condition includes vibration or shock incurred during shipment or moving of the printer, and the second service module includes a special capping structure having a range of movement along an axis generally transverse to a nozzle array of the printhead and a bias structure which urges the capping structure toward and into engagement with the printhead during a capping procedure (capping after printing is disclosed at column 2, lines 40-44, with cap and bias structure being clearly disclosed-, a replacement sled, which includes a cap moved as claimed, addresses the claimed condition, it is noted that there is no particular definition of what constitutes a "special capping structure"),
- a printhead (611),

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- service area (location of service station 110 in Fig. 1),
- first service module (an old sled),
- second service module (a new sled),
- a printhead carriage (320), and a service carriage (302).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US 5,638,099) in view of Johnson et al. (US 6,135,585) and Miller (US 4,340,897).

Nguyen et al. teaches the claimed invention except the service condition comprising fibers accumulating on the printhead nozzle plate and the second service module including a brush to remove fibers.

Johnson et al. discloses provision of a service module having an optional solvent applicator in addition to a wiper and cap (see Abstract), thereby suggesting provision of

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servicing modules having different cleaning functions. Further, Miller discloses a nozzle plate cleaner including brush which removes solid particles therefrom (Fig. 1; column 2, lines 48-51).

It would be obvious to one of ordinary skill in the art at the time the invention was made to provide a second service module including a brush in response to fibers accumulating on the printhead nozzle plate in Nguyen et al. because the provision thereof would facilitate removing solid particles, including fibers, from the nozzle plate, thereby improving print quality.

Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US 5,638,099) in view of Johnson et al. (US 6,135,585) and Terasawa et al. (US 4,951,066).

Nguyen et al. teaches the claimed invention except the service condition including ink accumulation on the nozzle plate, and the second printhead cleaner includes a wiper.

Johnson et al. discloses provision of a service module having an optional solvent applicator in addition to a wiper and cap (see Abstract), thereby suggesting provision of servicing modules having different cleaning functions. Further, Terasawa et al. teaches a wiper made of textile (11 C made of unwoven fabric; column 7, lines 51-57) for removing accumulated ink from a nozzle plate, the wiper being provided in addition to a

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cap and blade-type wiper to enable always providing stable ink discharge easily and reliably (column 8, lines 35-39).

It would be obvious to one of ordinary skill in the art at the time the invention was made to provide a second service module including a textile wiper in addition to a cap and blade-type wiper in response to ink accumulation on the nozzle plate in Nguyen et al. because the provision thereof would enable always providing stable ink discharge easily and reliably.

Claims 14 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US 5,638,099) in view of Shibata (US 5,589,861).

Nguyen et al. teaches the claimed invention except service condition including ink on a printhead interconnect and the second service module including a brush arranged to clean the interconnect.

Shibata discloses a service module (600 in Fig. 7) including a brush (618) arranged to clean the printhead interconnect. It would be obvious to one of ordinary skill in the art at the time the invention was made to provide the Shibata service module in response to a condition of ink on a printhead interconnect in Nguyen et al. because the provision thereof would enable cleaning of the printhead interconnect, thereby improving printer operation.

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Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US 5,638,099) in view of Nystrom et al. (US 5,530,463).

Nguyen et al. teaches the claimed invention except the special capping structure including a relatively hard, non-resilient cap structure which contacts the printhead during the capping procedure.

Nystrom et al. discloses use of a relatively hard, non-resilient cap structure which contacts a printhead during a capping procedure which will not collapse under pressure developed during a priming or maintenance operation (column 6, lines 4-19).

It would be obvious to one of ordinary skill in the art at the time the invention was made to provide the cap of the second module as a relatively hard, non-resilient cap structure because such provision would prevent the cap from collapsing under pressure developed during a priming or maintenance operation.

Allowable Subject Matter

3. Claims 3-9, 11, 18-22, 24, 32, and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claim 31 is allowed.

Response to Arguments

5. Applicant's arguments filed June 24, 2002 have been fully considered but they are not persuasive.

With respect to claims 1 and 17, Applicants argue Nguyen does not teach each of the foregoing claim limitations since the discussion in Nguyen concerns replacement of worn parts.

Examiner's position is that Nguyen teaches the claimed limitations as discussed above.

With respect to claims 28 and 30, Applicants argue that the replacement sled of Nguyen is used in a standard printhead service mode, not in a special service mode, since its purpose is replacement of a worn wiper.

Examiner's position is that Nguyen teaches the provision of replacement sled, thereby providing a new wiper or wipers to address the wiping condition. As no particular limitation to the "special service function" is defined, the different wiper function of a new wiper is deemed to be "special" with respect to the wiping function of a worn-out wiper.

With respect to claims 14, 16, and 27, Applicants argue that a prima facie case of obviousness has not been established and the references do not teach or suggest the claimed invention.

Examiner maintains positions above with respect to these claims.

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Examiner maintains the rejections of claims 10, 12, 23, and 25 since Applicants did not address these claims.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hilten can be reached at (703) 308-0719. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



MICHAEL NGHIEM
PRIMARY EXAMINER

Michael Nghiem

September 15, 2002